UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,804	09/29/2003	Shingo Tanaka	02887.0250	9918

22852 7590 12/01/2010

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER	
ALI, FARHAD	
ART UNIT	**PAPER NUMBER**
2478	

MAIL DATE	DELIVERY MODE
12/01/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/671,804
Filing Date: September 29, 2003
Appellant(s): TANAKA ET AL.

Yanbin Xu
(Registration # 65,418)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 09/20/2010 appealing from the Office action mailed 04/23/2010.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-8 and 11-20 are rejected and pending.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,366,622	Brown et al.	04-2002
6,907,227	Fujioka, Susumu	06-2005
2002/0090968	Lee et al.	07-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US 6,366,622 B1) in view of Fujioka (US 6,907,227 B2) and further in view of Lee et al. (US 2002/0090968 A1).

Claim 1

Brown teaches a master communication device capable of simultaneously communicating with slave communication devices within a first limited number determined in advance ([Brown] Column 4 Lines 15-17 “A piconet starts with two connected devices, such as a portable PC and cellular phone, and may grow to eight connected devices”), comprising:

a communication judgment unit configured to judge whether or not one of said slave communication devices which has issued a communication request is currently connected ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and

Column 28 Lines 1-5, “The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306”); and

a communication connection unit configured to connect said slave communication device judged not to be connected by said communication judgment unit ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 27 Lines 41-47 “The PAGE SCAN substate is initiated in state 1266 by the device which then becomes the master. If there is a hit from a slave, the slave response substate 1268 is entered. If there is no hit, the standby or connection state 1264 is reentered. Once in state 1268, if the slave responds before a timeout period, then the connected state 1270 is entered”).

Brown does not specifically disclose a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number; a release selection unit configured to select at least one of said slave communication devices to be released, when determined to have reached said second limited number; and a communication release unit configured to release the selected slave communication device.

Fujioka teaches that "Slave terminals and a master terminal are wirelessly connected according to the Bluetooth protocol. When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave

terminals are switched into inactive slave terminals according to the predetermined rules" [abstract] in order "to efficiently use the resources in the system" [abstract] .

It would have been obvious to one of ordinary skill in the art at the time of invention to create the invention of Brown to include "When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules" as taught by Fujioka in order "to efficiently use the resources in the system" [abstract].

The modified Brown does not specifically disclose wherein the second limited number is less than said first limited number.

Lee teaches in paragraph [0054] "The memory 32 stores priorities of the slave devices that are currently linked to the Piconet. Further, the memory 32 stores a maximum number of slave devices of the high priority and medium priority, respectively (hereinafter called `high priority maximum number` and `medium priority maximum number`, respectively)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of the modified Brown to include "a maximum number of slave devices of the high priority and medium priority" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 2

The modified Brown reference teaches the master communication device according to claim 1, further comprising:

a waiting registration unit configured to register in an order said slave communication device which issues said communication request, in the issued order, when the number of currently connected slave communication devices is determined to have reached said second limited number; and a communication connection unit configured to select and connect at least one of said slave communication device in the order registered in said waiting registration unit (see claim 1 rejection and [Fujioka] Column 16 Lines 45-53 “In particular, in the step S10, one of the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state. In other words, the master terminal 1 stores in the memory unit 80 the order in which the slave terminals are placed in the inactive state. For example, the slave terminals 9 through 11 are pit into the inactive state in the first-in-first-out (FIFO) order of the slave terminals 9, 11, and 10 as indicated in the memory unit 80”).

Claim 3

The modified Brown reference teaches the master communication device according to claim 1, wherein said release selection unit selects by priority said slave communication device which has performed the earliest communication among said slave communication devices connected currently (see claim 1 rejection and [Fujioka]

Column 16 Lines 45-53 “In particular, in the step S10, one of the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state. In other words, the master terminal 1 stores in the memory unit 80 the order in which the slave terminals are placed in the inactive state. For example, the slave terminals 9 through 11 are pit into the inactive state in the first-in-first-out (FIFO) order of the slave terminals 9, 11, and 10 as indicated in the memory unit 80”).

Claim 4

The modified Brown reference teaches the master communication device according to claim 1, wherein said release selection unit selects by priority the slave communication device which has been connected for the longest time among said slave communication devices connected currently (see claim 1 rejection and [Fujioka] Column 16 Lines 45-53 “In particular, in the step S10, one of the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state. In other words, the master terminal 1 stores in the memory unit 80 the order in which the slave terminals are placed in the inactive state. For example, the slave terminals 9 through 11 are pit into the inactive state in the first-in-first-out (FIFO) order of the slave terminals 9, 11, and 10 as indicated in the memory unit 80”).

Claim 5

The modified Brown reference teaches the master communication device according to claim 1, further comprising a connection release unit configured to release

connection for said slave communication device, when the connected slave communication device has not performed data transferring during not less than a prescribed period ([Brown] Column 28 Lines 8-12, "FIG. 29E illustrates the active sequence. The CSM 1244 begins in the standby or connection state 1308. If there are periodic transactions with remote units in state 1310, then the connection state 1312 is entered. If not, the standby or connection state 1308 is reentered").

Claim 6

The modified Brown reference teaches the master communication device according to claim 1, wherein release of connection for said slave communication device is performed by setting said slave communication device to be in an electric power saving mode ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 7

The modified Brown reference teaches the master communication device according to claim 6, wherein communication for said slave communication device is performed according to a specification of Bluetooth;

said master communication device is a master equipment;

said slave communication device is a slave equipment; and

said electric power saving mode is a park mode.

([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 8

The modified Brown reference teaches the master communication device according to claim 1, wherein communication for slave communication device is performed according to a specification of Bluetooth. ([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7").

Claim 11

Brown teaches a communication control apparatus which controls a slave communication device connected to a master communication device capable of

simultaneously communicating with said slave communication device within a first limited number determined in advance, comprising:

a connection report receiving unit configured to receive a connection report from said slave communication device newly connected to said master communication device; a connection information registration unit configured to register information relating to said slave communication device currently connected to said master communication device ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 28 Lines 1-5, “The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306”).

Brown does not specifically disclose a connected number judgment unit configured to judge that the number of said slave communication devices connected to said master communication device reaches a second limited number, based on information registered in said connection information registration unit; a communication device selection unit configured to select at least one of said slave communication devices that connection for said master communication device is to be released, when determined to have reached said second limited number; and a release instruction unit configured to transmit a release instruction to said slave communication device selected by said communication device selection unit.

Fujioka teaches that "Slave terminals and a master terminal are wirelessly connected according to the Bluetooth protocol. When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the

wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules" [abstract] in order "to efficiently use the resources in the system" [abstract] .

It would have been obvious to one of ordinary skill in the art at the time of invention to create the invention of Brown to include "When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules" as taught by Fujioka in order "to efficiently use the resources in the system" [abstract].

The modified Brown does not specifically disclose wherein the second limited number is less than said first limited number.

Lee teaches in paragraph [0054] "The memory 32 stores priorities of the slave devices that are currently linked to the Piconet. Further, the memory 32 stores a maximum number of slave devices of the high priority and medium priority, respectively (hereinafter called `high priority maximum number` and `medium priority maximum number`, respectively)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of the modified Brown to include "a maximum number of slave devices of the high priority and medium priority" as taught by Lee in order to

"prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 12

The modified Brown reference teaches the slave communication device according to claim 11, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and a release of connection between said master communication device and said slave communication device is performed to be set in a park mode ([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 13

Brown teaches a communication system, comprising:

at least one of slave communication devices; and

a master communication device configured to be able to communicate simultaneously with said slave communication device within a first limited number

determined in advance, ([Brown] Column 4 Lines 15-17 “A piconet starts with two connected devices, such as a portable PC and cellular phone, and may grow to eight connected devices”)

wherein said master communication device includes:

a communication judgment unit configured to judge whether or not one of said slave communication devices which has issued a communication request is currently connected([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 28 Lines 1-5, “The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306”);

a communication connection unit configured to connect said slave communication device determined not to be connected by said communication judgment unit ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 27 Lines 41-47 “The PAGE SCAN substate is initiated in state 1266 by the device which then becomes the master. If there is a hit from a slave, the slave response substate 1268 is entered. If there is no hit, the standby or connection state 1264 is reentered. Once in state 1268, if the slave responds before a timeout period, then the connected state 1270 is entered”).

Brown does not specifically disclose a connected number judgment unit configured to judge whether or not the number of said slave communication devices connected currently reaches a second limited number; a release selection unit configured to select at least one of said slave communication devices to be released,

when determined to have reached said second limited number; and a communication release unit configured to release the selected slave communication device.

Fujioka teaches that "Slave terminals and a master terminal are wirelessly connected according to the Bluetooth protocol. When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules" [abstract] in order "to efficiently use the resources in the system" [abstract] .

It would have been obvious to one of ordinary skill in the art at the time of invention to create the invention of Brown to include "When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules" as taught by Fujioka in order "to efficiently use the resources in the system" [abstract].

The modified Brown does not specifically disclose wherein the second limited number is less than said first limited number.

Lee teaches in paragraph [0054] "The memory 32 stores priorities of the slave devices that are currently linked to the Piconet. Further, the memory 32 stores a maximum number of slave devices of the high priority and medium priority, respectively (hereinafter called `high priority maximum number` and `medium priority maximum

number`, respectively)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of the modified Brown to include "a maximum number of slave devices of the high priority and medium priority" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 14

The modified Brown reference teaches the communication system according to claim 13, wherein said master communication device includes:

a waiting registration unit configured to register said slave communication device which has issued said communication request, in the issued order, when the number of currently connected slave communication devices is determined to have reached said second limited number; and a communication connection unit configured to select and connect at least one of said slave communication devices in the order registered to said waiting registration unit. (see claim 13 rejection and [Fujioka] Column 16 Lines 45-53 "In particular, in the step S10, one of the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state. In other words, the master terminal 1 stores in the memory unit 80 the order in which the slave terminals are placed in the inactive state. For example, the slave terminals 9 through 11 are pit

into the inactive state in the first-in-first-out (FIFO) order of the slave terminals 9, 11, and 10 as indicated in the memory unit 80").

Claim 15

The modified Brown reference teaches the communication system according to claim 13, wherein said slave communication device includes:

a master communication device connection judgment unit configured to judge whether or not to be connected to said master communication device, when communication request for said master communication device has been issued ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 27 Lines 49-55, "FIG. 29B illustrates the page sequence. The CSM 1244 begins in the standby or connection state 1276 (for duration T.sub.page scan). The PAGE substate is initiated in state 1278. If there is a hit, the master response substate 1280 is entered. If there is no hit, the standby or connection state 1276 is reentered. Once in state 1280, if the master responds before a timeout period, then the connected state 1282 is entered");

a release report signal supply unit configured to transmit a release report to said communication control apparatus when connection for said master communication device is released; and a connection release unit configured to release connection for said master communication device when a release instruction for said master communication device is received from said communication control apparatus, while being connected to said master communication apparatus ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 28-31, "First, the

master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment" and Column 5 Lines 52-53, "Slave units can also demand to be put into HOLD mode" where Hold and Park are both types of power saving modes and [Tanaka] applicant admits in paragraph [0014] "In the Bluetooth, an effective method called as the park mode is defined for temporary release"),

wherein said communication control apparatus includes:

a connection report receiving unit configured to receive a connection report from said slave communication device newly connected to said master communication device; a connection information registration unit configured to register information relating to said slave communication devices currently connected to said master communication device ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306");

a connected number judgment unit configured to judge whether or not the number of said slave communication device reaches said second limited number, based on the information registered to said connection information registration unit; a communication device selection unit configured to select at least one of said slave communication devices of which connection for said master communication device is to be released, when determined to have reached said second limited number; and a release instruction unit configured to transmit release instruction to said slave

communication device selected by said communication device selection unit (See claim 13 rejection).

Claim 16

The modified Brown reference teaches the slave communication device according to claim 13, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and a release of connection between said master communication device and said slave communication device is performed by setting in a park mode ([Brown] Column 28 Lines 16-28, "Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244" and "These states and substates are defined in the Bluetooth specification, version 0.7" and Column 28 Lines 28-33, "First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon").

Claim 17

Brown teaches a computer readable medium comprising a computer program code for performing communication between at least one of slave communication devices and a master communication device capable of simultaneously communicating

with said slave communication devices within a first limited number determined in advance, the computer program code performing:

judging by said master communication device whether or not one of said slave communication devices which has issued a communication request is connected currently ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 28 Lines 1-5, “The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306”);

connecting said slave communication devices judged that said slave communication device is not connected currently, to said master communication device ([Brown] Column 27 Lines 17-18, “Connection State Machine (CSM)” and Column 27 Lines 41-47 “The PAGE SCAN substate is initiated in state 1266 by the device which then becomes the master. If there is a hit from a slave, the slave response substate 1268 is entered. If there is no hit, the standby or connection state 1264 is reentered. Once in state 1268, if the slave responds before a timeout period, then the connected state 1270 is entered”);

Brown does not specifically disclose judging by said master communication device whether or not the number of said slave communication devices connected currently reaches a second limited number; selecting by said master communication device at least one of said slave communication devices to be released, when determined to have reached said second limited number; and releasing the selected slave communication device by said master communication device.

Fujioka teaches that "Slave terminals and a master terminal are wirelessly connected according to the Bluetooth protocol. When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules" [abstract] in order "to efficiently use the resources in the system" [abstract] .

It would have been obvious to one of ordinary skill in the art at the time of invention to create the invention of Brown to include "When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals according to the predetermined rules" as taught by Fujioka in order "to efficiently use the resources in the system" [abstract].

The modified Brown does not specifically disclose wherein the second limited number is less than said first limited number.

Lee teaches in paragraph [0054] "The memory 32 stores priorities of the slave devices that are currently linked to the Piconet. Further, the memory 32 stores a maximum number of slave devices of the high priority and medium priority, respectively (hereinafter called `high priority maximum number` and `medium priority maximum number`, respectively)" in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of the modified Brown to include "a maximum number of slave devices of the high priority and medium priority" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

Claim 18

The modified Brown reference teaches the medium according to claim 17, the computer program code further comprising:

judging by said master communication device whether or not one of said slave communication devices which has issued communication request is connected currently ([Brown] Column 27 Lines 17-18, "Connection State Machine (CSM)" and Column 28 Lines 1-5, "The INQUIRY substate is initiated in state 1302. If there is a hit, or a timeout, the status table is updated in state 1304 and the previous connection or standby state is entered in state 1306");

judging by said master communication device whether or not the number of said slave communication devices connected currently reaches said second limited number (See claim 17 rejection);

registering said slave communication device which has issued the communication request to a waiting registration unit of said master communication device, in the issued order, when the number of currently connected slave communication devices is determined to have reached said second limited number (See

claim 17 rejection and [Fujioka] Column 16 Lines 45-53 “In particular, in the step S10, one of the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state. In other words, the master terminal 1 stores in the memory unit 80 the order in which the slave terminals are placed in the inactive state. For example, the slave terminals 9 through 11 are pit into the inactive state in the first-in-first-out (FIFO) order of the slave terminals 9, 11, and 10 as indicated in the memory unit 80”);

selecting by said master communication device at least one of said slave communication devices to be released, when determined to have reached said second limited number (See claim 17 rejection);

selecting at least one of said slave communication devices and connecting it to said master communication device, in the order registered to said waiting registration unit (See claim 17 rejection and [Fujioka] Column 16 Lines 45-53 “In particular, in the step S10, one of the inactive slave terminals is selected based upon an order in which the slave terminals are placed in the active state. In other words, the master terminal 1 stores in the memory unit 80 the order in which the slave terminals are placed in the inactive state. For example, the slave terminals 9 through 11 are pit into the inactive state in the first-in-first-out (FIFO) order of the slave terminals 9, 11, and 10 as indicated in the memory unit 80”).

Claim 19

The modified Brown reference teaches the medium according to claim 17, the computer program code further performing:

judging by said slave communication devices whether or not to be connected to said master communication device, when communication request for said master communication device is issued;

transmitting a release report from said slave communication device to said communication control apparatus when connection for said master communication device is released; releasing connection between said master communication device and said slave communication device when a release instruction for said master communication device is received from said communication control apparatus, during being connected to said master communication device;

receiving by said communication control apparatus a connection report from said slave communication devices newly connected to said master communication device; registering information relating to said slave communication devices currently connected to said master communication device, to said communication control apparatus;

judging by said communication control apparatus whether or not the number of said slave communication devices connected to said master communication device reaches said second limited number, based on the registered information;

selecting by said communication control apparatus at least one of said slave communication devices of which connection for master communication device is to be released, when determined to have reached said second limited number; and

transmitting a release instruction from said communication control apparatus to the selected slave communication device (See claim 17 and 18 rejection).

Claim 20

The modified Brown reference teaches the medium according to claim 17, wherein communication between said master communication device and said slave communication device is performed according to a specification of Bluetooth; and a release of connection between said master communication device and said slave communication devices is performed by setting in a park mode ([Brown] Column 28 Lines 16-28, “Referring to FIGS. 29A through 29H, there are flow diagrams illustrating the operation of the connection state machine (CSM) 1244” and “These states and substates are defined in the Bluetooth specification, version 0.7” and Column 28 Lines 28-33, “First, the master establishes a beacon channel in state 1328 by placing the slave in Park Mode via a message communicating the beacon channel parameters and the salve's assignment. In step 1330 the slave goes into low power Parked State and times the interval to the next beacon”).

(10) Response to Argument

The examiner summarizes the various points raised by the appellant and addresses them individually.

(A) Appellant Argues: "A prima facie case of obviousness has not been established" (Appeal Brief: page 13, paragraph 1) and "Neither Brown, nor Fuiioka, nor Lee, nor any combination of, teaches or suggests the elements of claim 1 recited above" (Appeal Brief: page 16, paragraph 1)

In Response:

The appellant has argued that no prima facie case of obviousness has been established for these claims and there is no motivation for one of ordinary skill in the art to modify the references to achieve the claimed combination.

In response to appellant's arguments, the examiner would like to draw attention to MPEP § 2143 (citing KSR, 82 USPQ2d at 1385, 1395-97) which states:

"Exemplary rationales that may support a conclusion of obviousness include:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention".

In this case, the examiner maintains that there is some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention, and such rational was provided to the appellant in the Final Rejection dated 04/23/2010 and is also repeated below.

It would have been obvious to one of ordinary skill in the art at the time of invention to create the invention of Brown to include "When a number of the slave terminals exceeds a predetermined number of the slave terminals for the wireless connection, the wireless connections are controlled by a predetermined set of rules. Active slave terminals are switched into inactive slave terminals

according to the predetermined rules" as taught by Fujioka in order "to efficiently use the resources in the system" [abstract].

It would have been obvious to one of ordinary skill in the art at the time of the invention to create the invention of the modified Brown to include "a maximum number of slave devices of the high priority and medium priority" as taught by Lee in order to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]).

The appellant has additionally argued that Fujioka and Lee fail to cure the deficiencies of Brown. The examiner respectfully disagrees and maintains that the modified Brown reference reads upon the present claims for the reasoning set forth in the Final Rejection dated 04/23/2010. Fujioka teaches the concept of placing active slave terminals in the inactive state when the number of slave terminals exceeds a predetermined number of the slave terminals for the wireless connection [abstract]; the motivation for doing so is "to efficiently use the resources in the system" [abstract]. Lee teaches the concept of priorities of slave devices, where each priority has a maximum number of slave devices; and the motivation for doing so is to "prevent an excessive number of slave devices from having high and medium priorities in the Piconet" (Lee: Paragraph [0071]). Therefore, in the case where there is more than one priority level as taught by Lee, the maximum number in each is less than the total maximum number of slave devices for all priorities, which the examiner interprets as analogous to the appellant's claim of a second limited number less than said first limited

number respectively. Therefore, the examiner maintains that the modified Brown teaches the appellant's claimed limitations.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Farhad Ali/

Examiner, Art Unit 2478

Conferees:

/Kenny S Lin/

Primary Examiner, Art Unit 2478

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2478